shaded with pinkish-white; secondaries pale fawn-colour, clouded with darker scales near the anal angle and along part of the outer margin, and crossed about the middle by a narrow line (corresponding to the line that crosses the primaries); the underside pale whitish-fawn-colour, with a very indistinct line crossing both wings: head, thorax, abdomen, and legs pale fawn-colour, the antennæ and legs slightly darker.—

Female. Primaries and secondaries dark reddish-brown, with the lines greyer in colour and the outer margins thickly irrorated with greyish-black scales; the primaries with the basal half banded with yellowish-fawn-colour (the colour being brighter about the middle of the wing), the spot on the costal margin near the apex much more distinct, and the pinkish colour on the outer margin less extended; the underside of both wings altogether darker, and with a submarginal greyish line; head and front of the thorax yellowish-fawn-colour, the rest of the thorax and the abdomen pale pinkish-fawn-colour, the legs dark reddish-brown, the antennæ whitish-fawn-colour. Expanse,  $\delta 2\frac{1}{10}$ , 2 inches.

Hab. Mexico, Jalapa, Paso de San Juan in Vera Cruz (coll. Schaus); Panama, Chiriqui (Ribbe, in mus. Staudinger).

Two males and one female, the males agreeing well with each other. We figure a pair from Mexico.

Since the publication of my remarks on the genus *Herbita*, a specimen of the following species has been communicated by Dr. Staudinger.

## 3. Herbita (?) nedusia, sp. n. (Tab. XLIV. fig. 1, &.)

Male. Primaries and secondaries reddish-brown; the primaries with the outer half clouded with greyish-brown, a narrow dark brown line extending from the apex to the inner margin near the anal angle, the line being marked with small yellowish dots, and a large light-brown spot close to the anal angle, the fringe brown; secondaries crossed from the costal to the inner margin slightly beyond the middle by two narrow brown lines, the outer one waved, below which the wing is lighter brown, a submarginal zigzag brown line extending partly across the wing from the anal angle, the fringe brown; the underside of both wings pale greyish-brown, with the outer margins clouded with darker brown: head, thorax, abdomen, antennæ, and legs reddish-brown. Expanse 2 inches.

Hab. Panama, Chiriqui (Trötsch, in mus. Staudinger).

#### OXYDIA

Oxydia, Guenée, Sp. gén. des Lép. ix. p. 52 (1857) (part.).

Guenée divided Oxydia into six groups, several of which have since been treated as generically distinct. The genus still contains a large number of species, and it is well represented in our region. Some of its members vary to a very great extent.

# 1. Oxydia mexicata.

Oxydia mexicata, Guen. Sp. gén. des Lép. ix. p. 571; Walk. Cat. xx. p. 482.

Hab. Mexico, Orizaba 12.

Both this and the following species are unknown to me.

# 2. Oxydia clarata.

Oxydia clarata, Guen. Sp. gén. des Lép. ix. p. 571; Walk. Cat. xx. p. 482.

Hab. Mexico, Cordova 12.

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3. Oxydia apidania.

Phalæna Geometra apidania, Cram. Pap. Exot. iii. p. 103, t. 252. ff. C, D 1.

Oxydia apidaniata, Guen. Sp. gén. des Lép. ix. p. 582.

Oxydia apidania, Walk. Cat. xx. p. 513; Möschl. Verh. zool.-bot. Ges. Wien, 1881, p. 3974.

Hab. Mexico, Coatepec (coll. Schaus), Cuesta de Misantla (M. Trujillo); Panama, Chiriqui (Arcé, in mus. D.; Trötsch, in mus. Staudinger), Bugaba 800 to 1500 feet (Champion), Colon (Boucard, in mus. D.).—Guiana, Surinam 1234.

This species varies to an indefinite extent. We have received a good series of specimens, but hardly two of them are exactly alike on the upperside: some are quite dark brown, with the lines crossing the wings very indistinct; others are of a pale colour, with the brown lines sharply defined. The underside, on the contrary, exhibits very little variation. It is possible that one or the other of these forms may belong to the species described by Guenée.

4. Oxydia vesulia.

Phalæna Geometra vesulia, Cram. Pap. Exot. iii. p. 79, t. 240. ff. B, C1.

Oxydia vesuliata, Guen. Sp. gén. des Lép. ix. p. 602.

Oxydia vesulia, Walk. Cat. xx. p. 53<sup>3</sup>; Möschl. Verh. zool.-bot. Ges. Wien, 1881, p. 396<sup>4</sup>; Beitr.

zur Schmett.-Fauna von Jamaica, p. 67<sup>5</sup>.

Hab. Mexico, Paso de San Juan in Vera Cruz (coll. Schaus); Guatemala, Coatepeque, Panzos (Champion); Panama, Chiriqui (Trötsch, in mus. Staudinger), Bugaba 800 to 1500 feet, Volcan de Chiriqui 2000 to 3000 feet (Champion).—Guiana, Surinam 123, Cayenne 237, Paramaribo 4; Ecuador; Brazil; Antilles, Jamaica 5, Haiti.

This appears to be a common and widely distributed species in Tropical America. O. vesulia may be distinguished from all the allied forms by having the back of the head white.

5. Oxydia vitiligata.

Oxydia vitiligata, Feld. & Rogenh. Reise der Novara, Lep. t. 122. f. 171.

Hab. Mexico, Coatepec (coll. Schaus; Brooks), Cuesta de Misantla (M. Trujillo), Teapa in Tabasco (H. H. Smith); Guatemala, in the city (Rodriguez), San Gerónimo and Panima in Vera Paz (Champion); Costa Rica (Gabb, in mus. D.); Panama, Chiriqui (Trötsch, in mus. Staudinger), Volcan de Chiriqui 2000 to 3000 feet (Champion).— Ecuador; Brazil<sup>1</sup>; Peru; Paraguay.

I believe this insect to be a well-marked dark form of O. vesulia (Cram.). It varies very considerably in size, colour, and markings. The males are always darker than the females. We have received a very large series of it from our region, and also from South America.

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## 6. Oxydia gastropachata. (Tab. XLIII. fig. 10, 2, var.)

Oxydia gastropachata, Guen. Sp. gén. des Lép. ix. p. 621; Walk. Cat. xx. p. 552.

Hab. Mexico, Jalapa (Höge; coll. Schaus), Coatepec (coll. Schaus); Guatemala, in the city (Rodriguez).—Brazil 12.

Apparently a rare species. We figure a variety of the female from Mr. Schaus's collection.

# 7. Oxydia aromata, sp. n. (Tab. XIIII. fig. 11, 2.)

Female. Primaries and secondaries pale cream-colour, each with a black dot at the end of the cell, and crossed beyond the middle by a narrow yellowish-brown line, which extends from the apex to the inner margin of the primaries, and is then continued across the secondaries to about the middle of the inner margin; the primaries with the base broadly banded with fawn-colour, the apex and the outer side of the line crossing the wing to the outer margin also fawn-colour, an indistinct row of cream-coloured patches extending from the apex to the anal angle, the last patch much larger than the others; the secondaries with the base irrorated with dark fawn-coloured scales, and with a rather large irregular black spot near the apex on the outer side of the line that crosses the wing, the wing itself on the outer side of the line clouded with fawn-colour near the anal angle, and with three distinct pale cream-coloured spots extending across it towards the apex; the fringe pale yellowish-brown; the underside with the markings very much as above, but slightly darker in colour: head, thorax, abdomen, and legs cream-colour, the antennæ yellowish-brown. Expanse 3½ inches.

Hab. Mexico, Paso de San Juan in Vera Cruz (coll. Schaus).

The single specimen from which the description is taken is so very distinct from all the forms of the allied species that I have ventured to name it; it is possible, however, that it may be only an extreme variety of O. vesulia (Cram.) or O. gastropachata, Guen.

# 8. Oxydia trychiata.

Oxydia trychiata, Guen. Sp. gén. des Lép. ix. p. 56<sup>1</sup>; Walk. Cat. xx. p. 51<sup>2</sup>. Chærodes translineata, Walk. Cat. xx. p. 24<sup>3</sup>.

Mucronodes mundipennata, Walk. Cat. xx. p. 37 4.

Hab. Panama, Chiriqui (Trötsch, in mus. Staudinger).--Venezuela 3; Brazil 124.

# 9. Oxydia platypterata.

Oxydia platypterata, Guen. Sp. gén. des Lép. ix. p. 61, Phalén. t. 4. f. 3<sup>1</sup>; Walk. Cat. xx. p. 54<sup>2</sup>. Cratoptera recurvaria, Herr.-Schäff. Samml. aussereur. Schmett. pp. 65, 83, ff. 483, 484<sup>3</sup>. Cratoptera (?) recurvaria, Walk. Cat. xxvi. p. 1494<sup>4</sup>.

? Oxydia nattereri, Feld. & Rogenh. Reise der Novara, Lep. t. 122. f. 165.

Hab. Mexico, Coatepec (coll. Schaus); Panama, Chiriqui (Trötsch, in mus. Staudinger).—Colombia, Antioquia; Venezuela 34; Brazil 125.

Some specimens of this insect are almost uniformly coloured, and others very much spotted. I have very little doubt that O. platypterata, Guen., and O. nattereri, Feld. & Rogenh., belong to one and the same species.

10. Oxydia masthala, sp. n. (Tab. XLIII. fig. 9, 2.)

Female. Primaries and secondaries reddish-fawn-colour, each crossed by a dark blackish-brown line; the primaries with two yellowish-white spots on the outer side of the line, the apex and part of the costal margin irrorated with black scales; the secondaries crossed from near the apex to the inner margin slightly above the anal angle by two very indistinct, waved, greyish lines; the underside darker than above, thickly irrorated with black scales, and with a blackish-brown line crossing both wings; the fringe dark yellowish-brown: head, thorax, and abdomen fawn-colour; the antennæ pale yellowish-brown; the legs fawn-colour, irrorated with black scales. Expanse  $2\frac{1}{2}$  inches.

Hab. Panama, Chiriqui (Trötsch, in mus. Staudinger).

One specimen. Allied to O. platypterata, Guen.; but differs from all the examples of that species I have seen in having a blackish line on the underside crossing both wings. It is possible, however, that this insect may prove to be an extreme form of O. platyptera.

11. Oxydia medona, sp. n. (Tab. XLIII. figg. 15, 16, 2.)

Female. Primaries and secondaries yellowish-fawn-colour; the primaries with a greyish mark on the costal margin close to the apex, on the inner side of which is a small white spot, a minute black dot at the end of the cell, a dark waved line crossing from the costal to the inner margin between the small dot and the base, a dark brown line extending from near the apex to the middle of the inner margin, and a submarginal indistinct zigzag line crossing from the apex to the anal angle; the secondaries crossed from the middle of the costal margin to below the middle of the inner margin by a dark brown line, and with a small black dot at the end of the cell and a submarginal row of rather indistinct brownish points, the latter partly connected by faint lines; the fringe yellowish-fawn-colour, that on the inner margin of the secondaries white; the underside marked as above, but glossed with white, the submarginal lines more distinct and quite white: head, thorax, abdomen, antennæ, and legs fawn-colour. Expanse  $2\frac{1}{10}$  inches.

Hab. Guatemala, Volcan de Atitlan 2500 feet (Champion).

One female specimen. O. medona is very distinct from all the species of Oxydia known to me.

12. Oxydia mundata.

Oxydia mundata, Guen. Sp. gén. des Lép. ix. p. 57, Phalén. t. 10. f. 1<sup>1</sup>; Walk. Cat. xx. p. 51<sup>2</sup>. Hab. Panama, Volcan de Chiriqui 2000 feet (Champion).—Brazil <sup>12</sup>.

One specimen from Chiriqui, very nearly agreeing with Guenée's figure.

13. Oxydia artaxa, sp. n. (Tab. XLIII. figg. 12, 13, &; 14, \( \sigma\).)

Male. Primaries pale olive-brown, shaded with darker brown at the apex and along the outer margin, a narrow black double line extending from the apex to the middle of the inner margin, where on the outer side a short curved black line joins it and encloses a pale-coloured somewhat rounded spot, the disc of the wing thickly irrorated with silky-white scales, a curved black line crossing from the costal to the inner margin nearest the base, the fringe brown; secondaries yellowish-olive-brown, irrorated with whitish scales near the apex and along part of the outer margin, and crossed in the middle by a very faint line, the fringe yellowish-brown; the underside of the primaries bright yellowish-fawn-colour, almost yellow near the apex, faintly streaked with fine brown lines, and crossed from the apex to the middle of the inner margin by a fine brown line, which is edged with white on the outer side—that of the secondaries paler in colour, clouded with brown near the apex, and crossed beyond the middle from the costal nearly to the outer margin, but not reaching it and here curved sharply inwards to the inner margin, by a

narrow brown line, which is edged with white on the outer side, a small black dot at the end of the cell, the fringe yellow: head and front of the thorax yellowish, the rest of the thorax, the abdomen, antennæ, and legs brownish-fawn-colour. The female is considerably larger and darker than the male, but has all the markings very similar on the underside; the colour is greyish-brown, and the lines crossing the wings are much fainter: the head, thorax, abdomen, antennæ, and legs are pale brown. Expanse,  $32\frac{1}{3}$ , 3 inches.

Hab. Mexico, Jalapa (Höge), Coatepec (Brooks); Panama, Chiriqui (Trötsch, in mus. Staudinger), Volcan de Chiriqui 2000 to 3000 feet (Champion).—Ecuador.

Five specimens, two males and three females. These only show a very slight variation in colour. We figure a male from the Volcan de Chiriqui and a female from Jalapa.

## 14. Oxydia augusta, sp. n. (Tab. XLIII. figg. 17, 18, &.)

Male. Primaries and secondaries pale greyish-fawn-colour, thickly irrorated with brown scales; the primaries with three brown streaks crossing from the costal margin towards the outer margin, a zigzag brown line (curving inwards) crossing near the base from the costal to the inner margin, and a black line edged on the outer side with greyish-white extending from the apex to the middle of the inner margin, the wing on the outer side of the black line much clouded with reddish-brown; the secondaries partly crossed about the middle by a narrow black line and clouded on the outer side of this line with dark brown, a submarginal zigzag line extending from near the apex to the anal angle; the underside bright yellowish-fawn-colour, the primaries shaded with greyish-white near the apex, and crossed by a narrow brown line edged with greyish-white; the fringe yellow: head and front of the thorax yellowish-fawn-colour, the rest of the thorax, the abdomen, and legs pale fawn-colour, the antennæ brown. The female similar in colour to the male. Expanse,  $\mathcal{S}$  Q,  $2\frac{3}{4}$  inches.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (Champion).--Ecuador.

Mr. Champion captured three specimens of this species in Chiriqui, and I have a good series of it from Ecuador; these latter are slightly darker than the others.

### Subfam. ENNOMINÆ.

#### DREPANODES.

Drepanodes, Guenée, Sp. gén. des Lép. ix. p. 66 (1857); Walker, Cat. xx. p. 69; Packard, in Report of the U.S. Geol. Survey of the Territ. x. p. 537, t. 6. fig. 11 (neuration) (1876). Syssaura, Hübner, Verz. bek. Schmett. p. 150 (pars).

This genus contains numerous representatives, most of which are confined to Central or South America or the Antilles. Eleven species occur within our limits, four of which are described as new.

# 1. Drepanodes pionaria.

Drepanodes pionaria, Walk. Cat. xx. p. 71 1.

Hab. Mexico, Paso de San Juan in Vera Cruz (coll. Schaus); Guatemala, Cerro Zunil 4000 to 5000 feet (Champion); Panama, Chiriqui (Trötsch, in mus. Staudinger).—Antilles, Santo Domingo 1.

The three female specimens before me are very similar in colour and markings; the one from Mexico in Mr. Schaus's collection is paler than the others and has the dusky lines across the wings less distinct; the one from Guatemala is considerably darker. The male is apparently unknown.

### 2. Drepanodes moneta, sp. n. (Tab. XLIV. fig. 2, 2.)

Female. Primaries and secondaries pale brownish-fawn-colour; the primaries crossed from the apex to the inner margin by a narrow dark brown line, edged on the inner side with a very narrow silvery-white line, a curved dark fawn-coloured line near the base, a second line crossing the wing from the costal margin beyond the cell and joining the line extending from the apex to the inner margin beyond the middle, the apex and the outer margin thickly irrorated with black scales; the secondaries crossed about the middle by a continuation of the line on the primaries, and with a waved dark fawn-coloured submarginal line extending from the apex to the anal angle, and a black dot in the middle of the cell; the fringe reddish-brown; the underside pale yellowish-fawn-colour, thickly irrorated with small black spots, the outer margins of both wings broadly bordered with dark reddish-brown: head, antennæ, thorax, abdomen, and legs pale fawn-colour. Expanse 1½ inch.

Hab. Mexico, Coatepec (coll. Schaus).

Apparently allied to D. pionaria, Walk., but very distinct from it.

## 3. Drepanodes falcularia.

Patalene falcularia, Herr.-Schäff. Samml. aussereur. Schmett. p. 80, fig. 199 ¹. Comibæna falcularia, Herr.-Schäff. loc. cit.²

Drepanodes falcularia, Guen. Sp. gén. des Lép. ix. p. 693; Walk. Cat. xx. p. 774.

Hab. Mexico, Paso de San Juan in Vera Cruz (coll. Schaus); Guatemala, Volcan de Atitlan 2500 to 3500 feet (Champion); Panama, Bugaba 800 to 1500 feet (Champion).—Guiana, Surinam 234.

This species varies very much on the upperside: in some specimens the line crossing both wings is dark brown, in others it is almost wanting; the yellowish-white spots near the anal angle of the primaries, as shown in Herrich-Schäffer's figure, are sometimes entirely obliterated or replaced by blackish patches or dots. The underside shows little variation.

# 4. Drepanodes astanda, sp. n. (Tab. XLIV. fig. 3.)

Primaries and secondaries orange-yellow; the primaries slightly clouded at the base with a darker colour, and with a black dot in the middle of the cell, and a faint reddish-brown line extending from the apex to the inner margin above the anal angle, the outer margin of the wing irrorated with silvery-white scales; the secondaries with a small black dot in the cell and two indistinct blackish-brown patches below the middle nearest the anal angle, the outer margin irrorated with silvery-white scales; the underside of both wings bright yellow, the outer margins broadly bordered with dark reddish-brown: head, thorax, antennæ, and legs pale yellow; (abdomen wanting). Expanse 1¼ inch.

Hab. Mexico, Teapa in Tabasco (H. H. Smith).

One specimen. Allied to D. falcularia, Herr.-Schäff.

### 5. Drepanodes drepanula.

Syssaura drepanula, Hübn. Zutr. Samml. exot. Schmett. ii. p. 13, figg. 247, 248<sup>1</sup>; Verz. bek. Schmett. p. 150<sup>2</sup>.

Drepanodes drepanularia, Guen. Sp. gén. des Lép. ix. p. 71<sup>3</sup>.

Drepanodes drepanula, Walk. Cat. xx. p. 784.

Hab. Mexico, Teapa in Tabasco (H. H. Smith); Panama, Chiriqui (Trötsch, in mus. Staudinger).—Ecuador; Guiana, Surinam 134.

Our specimens are almost identical with Hübner's figure.

### 6. Drepanodes asina, sp. n. (Tab. XLIV. fig. 4, &.)

Male. Primaries and secondaries uniformly pale reddish-fawn-colour, slightly darker round the outer margins, the fringe pale yellowish-fawn-colour, both wings crossed by a darker reddish-fawn-coloured line bordered on the outer side with a much paler fawn-coloured line; the underside very similar in colour to the upperside but slightly paler, the central line crossing the wings very indistinct: head, thorax, abdomen, antennæ, and legs pale fawn-colour. Expanse  $1\frac{1}{4}$  inch.

Hab. Guatemala, Calderas 7000 feet (Champion).

One specimen.

## 7. Drepanodes impurpurata.

Drepanodes impurpurata, Walk. Cat. xx. p. 801.

Hab. Panama, Bugaba 800 to 1500 feet (Champion), Chiriqui (Trötsch, in mus. Staudinger).—Venezuela 1.

Our specimens agree well with the type in the National Collection.

# 8. Drepanodes (?) melina, sp. n. (Tab. XLIV. fig. 5, 2.)

Primaries and secondaries dark brown; the primaries crossed by two darker brown lines—the first near the base, the second extending from the apex to the middle of the inner margin, the latter bordered on the outer side with a rather wide greyish line which is widened towards the apex; the underside very similar to the upperside, but considerably paler, excepting round the outer margins: head, thorax, abdomen, antennæ, and legs dark brown. Expanse  $1\frac{2}{10}$  inch.

Hab. Mexico, Presidio de Mazatlan (Forrer), Paso de San Juan in Vera Cruz (coll. Schaus); Guatemala, Volcan de Atitlan 2500 to 3500 feet (Champion).

Our description and figure of this insect are taken from a Guatemalan example. I include this species in the genus *Drepanodes* with considerable doubt, all the specimens before me being females. The example from Presidio is paler than any of the others, and has the lines crossing the wings much more distinct.

# 9. Drepanodes vehemensaria.

Drepanodes vehemensaria, H. Edwards, Papilio, iv. p. 191.

Hab. Mexico, State of Vera Cruz (Schaus 1).

10. Drepanodes panamaria.

Drepanodes panamaria, Packard, Proc. Bost. Soc. Nat. Hist. xvi. p. 39 (1874) 1. (Reprinted in Report of the U.S. Geol. Survey of the Territ. x. p. 541, nota.)

Hab. Panama (Edwards 1).

Both this and the preceding species are unknown to me.

11. Drepanodes depranaria?

Drepanodes depranaria, Möschl. Verh. zool.-bot. Ges. Wien, xxxi. p. 397, t. 17. fig. 5 (1881) 1 (Beitr. zur Schmett.-Fauna von Surinam, iv. p. 7, t. 17. fig. 5).

Hab. Mexico, Paso de San Juan in Vera Cruz (coll. Schaus).—Guiana, Paramaribo 12.

Möschler's description was taken from a female specimen, the one captured by Mr. Schaus being a male; but I feel very little doubt that they belong to one and the same species.

### FALCINODES.

Falcinodes, Guenée, Sp. gén. des Lép. x. p. 33 (1857). Halesa, Walker, Cat. xx. p. 211 (1860).

The genus Falcinodes was founded by Guenée upon a single species (F. corvinaria) from Cayenne, the female only of which was known to him; the type (3) of Halesa, Walk. (H. asychisaria), was from Brazil. Additional species from Tropical America have since been described by Butler and Snellen.

1. Falcinodes asychisaria.

Halesa asychisaria, Walk. Cat. xx. p. 211<sup>1</sup>; Butler, Trans. Ent. Soc. Lond. 1881, p. 318<sup>2</sup>. Falcinodes gonodontaria, Snellen, Tijdschr. voor Ent. xvii. p. 61, t. 4. fig. 11<sup>3</sup>.

Hab. Mexico, Paso de San Juan in Vera Cruz (coll. Schaus); British Honduras, R. Sarstoon (Blancaneaux); Guatemala, in the city (Rodriguez), San Gerónimo (Champion).—Colombia, Rio Magdalena 3; Amazons 2; Brazil 1.

The single specimen from Mexico is paler in colour than any of the others. The species is well figured by Snellen <sup>3</sup>.

2. Falcinodes suggillaria?

Falcinodes suggillaria, Snellen, Tijdschr. voor Ent. xvii. p. 63, t. 5. fig. 11.

Hab. Mexico, Paso de San Juan in Vera Cruz (coll. Schaus).—Colombia, Rio Magdalena <sup>1</sup>.

The single male specimen from Mexico in Mr. Schaus's collection is rather darker than Snellen's figure, and has a much darker patch on the secondaries near the anal angle; but it probably belongs to the same species. The female is altogether more heavily marked than the male.

### 3. Falcinodes glauca.

Halesa glauca, Butler, Trans. Ent. Soc. Lond. 1881, p. 3191.

Hab. Mexico, Coatepec (coll. Schaus).—Ecuador; Amazons 1; Peru.

#### PYRINIA.

Pyrinia, Hübner, Verz. bek. Schmett. p. 294 (1816); Walker, Cat. xx. p. 82. Crocopteryx, Guenée, Sp. gén. des Lép. ix. p. 72 (1857).

Fourteen species were included in this genus by Guenée, and others have since been added by Walker and Felder. *Pyrinia* is chiefly confined to Tropical America.

## 1. Pyrinia optivata.

Crocopteryx optivata, Guen. Sp. gén. des Lép. ix. p. 72 (4) 1.

Pyrinia optivata, Walk. Cat. xx. p. 842; Butl. Trans. Ent. Soc. Lond. 1881, p. 3183.

Melinodes (?) amphisaria, Walk. Cat. xx. p. 113 (3)4.

Hab. Panama, Bugaba 1000 feet, Volcan de Chiriqui 3000 feet (Champion).—Amazons 3, Ega 4; Brazil 12.

Two males from Chiriqui, almost identical with a specimen, which I believe is Guenée's type, in the National Collection.

### 2. Pyrinia helvaria.

Acroleuca helvaria, Herr.-Schäff. Samml. aussereur. Schmett. pp. 63, 80, fig. 2011.

Crocopteryx helvaria, Guen. Sp. gén. des Lép. ix. p. 752.

Pyrinia helvaria, Walk. Cat. xx. p. 863.

Hab. Panama, Chiriqui (Trötsch, in mus. Staudinger).—Guiana, Surinam 123; Ecuador.

A female specimen from Chiriqui in Dr. Staudinger's collection merely differs from Herrich-Schäffer's figure in having the outer margins of the primaries paler.

# 3. Pyrinia sterrhata.

Crocopteryx sterrhata, Guen. Sp. gén. des Lép. ix. p. 75 (3)1.

Pyrinia sterrhata, Walk. Cat. xx. p. 862.

Pyrinia incensata, Walk. Cat. xxvi. p. 14923.

Hab. Panama, Chiriqui (Trötsch, in mus. Staudinger; Ribbe), Bugaba 800 to 1500 feet (Champion).—Amazons, Pará<sup>3</sup>; Brazil <sup>12</sup>.

A small species, of which we have only received females.

# 4. Pyrinia arxata, sp. n. (Tab. XLIV. figg. 6, 7, &.)

Male. Primaries and secondaries dark orange-brown; the primaries crossed near the base from the costal to the inner margin by a fine dark >-shaped brown line, beyond which a dark brown line extends from the apex to about the middle of the inner margin; the secondaries crossed from the costal to the inner margin by two dark brown lines—the first about the middle, the second submarginal; underside pale yellowish-BIOL. CENTR.-AMER., Heter., Vol. II., May 1892.

brown, thickly irrorated with dark orange-brown scales, with lines crossing the wings as above, but more distinct: head, thorax, abdomen, and antennæ dark orange-brown, pale yellowish-brown beneath, the anus and legs yellowish-brown. Expanse  $\frac{9}{10}$  inch.

Hab. Panama, Chiriqui (Arcé, in mus. D.), Volcan de Chiriqui 2000 to 3000 feet (Champion).

The sexes of this species are very similar; the only specimen of the female that I have seen was collected by Arcé. Allied to P. sterrhata, Guen.

## 5. Pyrinia solata.

Crocopteryx solata, Guen. Sp. gén. des Lép. ix. p. 75 (3)1.

Pyrinia solata, Walk. Cat. xx. p. 862.

Pyrinia prusiasaria, Walk. Cat. xx. pp. 90, 2283.

Hab. Panama, Chiriqui (Trötsch, in mus. Staudinger).—Ecuador; Brazil 12, Rio Janeiro 3.

The specimen from Chiriqui in Dr. Staudinger's collection is paler in colour than either of those (from Brazil) in the British Museum.

### 6. Pyrinia rutilaria.

Pyrinia rutilaria, Hübn. Zutr. Samml. exot. Schmett. i. p. 29, figg. 173, 174<sup>1</sup>, and Verz. bek. Schmett. p. 294<sup>2</sup>; Walk. Cat. xx. p. 87<sup>2</sup>.

Crocopteryx rutilaria, Guen. Sp. gén. des Lép. ix. p. 763.

Hab. Panama, Bugaba 1000 feet (Champion).—Guiana, Surinam 123.

One specimen from Bugaba, almost identical with Hübner's figure.

# 7. Pyrinia megara, sp. n. (Tab. XLIV. figg. 8, 9, 3.)

Male. Primaries and secondaries dark brown, both wings crossed about the middle by a very indistinct darker brown line; underside yellowish-brown, with the costal margin of the primaries paler, and the apex reddish-brown, the secondaries crossed about the middle from the costal to the inner margin by a reddish-brown line: head, thorax, and abdomen dark brown, the underside and legs yellowish-brown; antennæ dark brown. Expanse 1 inch.

Hab. Guatemala, Zapote (Champion); Panama, Chiriqui (Arcé, in mus. D.).

The Chiriqui specimen is paler in colour than the one from Guatemala, and shows the lines crossing the wings more distinctly. The Guatemalan example is figured.

### CRATOPTERA.

Cratoptera, Herrich-Schäffer, Samml. aussereur. Schmett. pp. 44, 65 (1850–58); Guenée, Sp. gén. des Lép. ix. p. 76 (1857).

Cratoptera contains a few species from Tropical America. Four are here recorded from within our limits, three of which are described as new.

# 1. Cratoptera arvina, sp. n. (Tab. XLIV. fig. 10, 2.)

Female. Primaries and secondaries pale grey with a slight yellowish tinge, irrorated with very minute black

dots, a small black dot at the end of the cell of both wings, and a very faint brown spot on the costal margin just before the apex; the underside coloured as above: head, thorax, abdomen, antennæ, and legs pale grey. Expanse  $1\frac{3}{4}$  inch.

Hab. Mexico, Presidio de Mazatlan (Forrer), Paso de San Juan in Vera Cruz (coll. Schaus).

Mr. Schaus's specimens are rather more distinctly marked than ours; a worn male in his collection has the dark mark on the costal margin of the primaries very much more distinct, and is more shaded with yellow at the anal angle, and partly round the outer margin of the secondaries. We figure a female from Presidio de Mazatlan.

# 2. Cratoptera mena, sp. n. (Tab. XLIV. fig. 11, 2.)

Female. Primaries and secondaries greyish-mouse-colour, the primaries shaded with dark brown at the apex, and with a dark brown line crossing from the apex to the inner margin close to the base, this line continuing across the secondaries to the inner margin, both wings with a submarginal waved pale line with dark spots, the fringe dark brown; the underside pale mouse-colour, without markings: head, thorax, abdomen, legs, and antennæ pale mouse-colour. Expanse 13 inch.

Hab. Panama, Bugaba 1000 feet (Champion).

One specimen. This insect is allied to *C. retectaria*, Feld. & Rogenh., from which it may be at once distinguished by its darker colour and the waved submarginal line to both wings. It also approaches an undescribed species from Ecuador in my own collection.

# 3. Cratoptera atina, sp. n. (Tab. XLIV. figg. 12, 13, 2.)

Female. Primaries reddish-brown, crossed in the middle by a wide greenish-brown band, edged on the outer side with a silvery-grey line and on the inner side with a similarly-coloured much dentated line, the latter extending from the costal to the inner margin, a submarginal row of dark brown spots with silvery-grey points extending from the apex to the anal angle, and a small black dot at the end of the cell, the marginal line grey, the fringe dark reddish-brown; secondaries reddish-brown, with the base greenish-brown, a greyish line crossing the wing above the middle from the costal to the inner margin, the fringe dark reddish-brown; underside bright orange-yellow, the primaries slightly irrorated with brown scales, and with a dark brown narrow line crossing from the apex to about the middle of the inner margin, the apex with two or three small patches of white scales close to the costal margin, a submarginal row of dark brown spots extending from just below the apex to the anal angle, the secondaries with a few very minute dark brown dots close to the anal angle: head, thorax, abdomen, and legs dark reddish-brown above, bright orange-yellow beneath; antennæ dark brown. Expanse 1-6 inch.

Hab. Costa Rica, Caché (Rogers).

One specimen.

# 4. Cratoptera retectaria.

Cratoptera retectaria, Feld. & Rogenh. Reise der Novara, Lep. t. 133. fig. 17 (3)1.

Hab. Guatemala, San Gerónimo (Champion).—Amazons 1.

A worn female specimen from Guatemala agrees fairly well with Felder and Rogen-hofer's figure, and also with male examples from the Amazons in my own collection.

### GYNOPTERYX.

Gynopteryx, Guenée, Sp. gén. des Lép. ix. p. 78 (1857); Walker, Cat. xx. p. 92.

Gynopteryx contains numerous species, and it seems to be confined to Tropical America. Many of Walker's so-called species will not stand, as they are mostly forms of two or three variable insects.

1. Gynopteryx fundaria.

- 3. Apicia fundaria, Guen. Sp. gén. des Lép. ix. p. 871; Walk. Cat. xx. p. 1082.
- 3. Apicia impexaria, Guen. loc. cit. p. 883; Walk. Cat. xx. p. 1094.
- 2. Apicia juncturaria, Guen. loc. cit. p. 885; Walk. Cat. xx. p. 1026.
- 9. Gynopteryx thasusaria, Walk. Cat. xx. p. 947.
- 3. Apicia arbuaria, Walk. Cat. xx. p. 1028.
- 3. Caberodes (?) eldanaria, Walk. Cat. xx. p. 170°.
- 3. Caberodes (?) carcearia, Walk. Cat. xx. p. 17110.
- 9. Caberodes basifusata, Walk. Cat. xxvi. p. 1512 11.

Hab. Mexico 8 11, Durango (Forrer), Jalapa, Coatepec (coll. Schaus), Cordova (Rümeli), Atoyac in Vera Cruz (H. H. Smith), Omealca (M. Trujillo), Tierra Colorada in Guerrero 2000 feet (H. H. Smith); Guatemala, in the city (Rodriguez), Balheu, Panima, San Juan, and San Gerónimo in Vera Paz, Volcan de Atitlan 2500 to 3500 feet, Zapote, Dueñas (Champion); Costa Rica (Gabb, in mus. D.), Volcan de Irazu 6000 to 7000 feet (Rogers); Panama, Chiriqui (Arcé, in mus. D.; Trötsch and Ribbe in mus. Staudinger), Bugaba, Volcan de Chiriqui 2000 to 3000 feet, Caldera (Champion).—Colombia 3 4, Bogota 9, Antioquia; Guiana; Venezuela 7; Ecuador; Peru; Brazil 12, Rio Janeiro 7 10.

This insect is exceedingly common throughout Tropical America. It varies to any extent, from bright yellow to brownish-fawn-colour, and has been described under a considerable number of names, the sexes always as distinct species. With a series of over three hundred specimens before me, I am quite unable to separate any of the seven so-called species quoted above from G. fundaria, examples from the same locality completely running one into the other. I have only placed those together of which I have seen the types, or have specimens which have been named from the types; but there can be very little doubt that several others described by Walker will prove to be inseparable from G. fundaria (Guen.). The locality for Apicia juncturaria is given by Guenée 5 as North America? or Brazil?

# 2. Gynopteryx ——?

Hab. Mexico, Coatepec (coll. Schaus).

One worn specimen, a female, apparently distinct from the other species of Gynopteryx here enumerated.

## 3. Gynopteryx asopia, sp. n. (Tab. XLIV. fig. 14, &.)

Male. Primaries and secondaries very pale fawn-colour, the primaries slightly darker at the base, both wings crossed beyond the middle by a narrow brown line, and with a black dot at the end of the cell, their outer margins broadly clouded with dark brown; the underside very similar in colour, but without a line crossing the wings: head, thorax, and abdomen pale fawn-colour, the antennæ brown. The female more dusky in colour than the male. Expanse 1½ inch.

Hab. Mexico, Paso de San Juan in Vera Cruz (coll. Schaus); Guatemala, El Tumbador 2500 feet, Las Mercedes 3000 feet, Zapote (Champion).—Peru.

Mexican specimens are rather smaller and paler than those from Guatemala. Our description and figure are taken from Zapote examples. The female is unknown to me.

### 4. Gynopteryx mynes, sp. n. (Tab. XLIV. fig. 15, &.)

Male. Primaries and secondaries pale brownish-white, thickly irrorated with pale brown scales, both wings crossed beyond the middle by a waved dark brown line edged on the outer side with white, and with a black dot at the end of the cell; the primaries also with two indistinct curved pale brown lines crossing from the costal to the inner margin—the first near the base, the second between the cell and the dark brown line,—and on the outer side of the dark brown line a row of brownish-black spots—the first three small and distinct, the fourth larger and suffused; the marginal line of both wings pale brown and the fringe pale greyish-brown; the underside very similarly coloured, but more irrorated with brown scales. Expanse 1½ inch.

Hab. Mexico, Cuernavaca in Morelos (H. H. Smith).

Two specimens, both males.

## 5. Gynopteryx megasa, sp. n. (Tab. XLIV. fig. 16, &.)

Male. Primaries and secondaries pale greyish-brown, both wings crossed by a pale yellow line edged on the inner side with reddish-brown, a rather large <-shaped mark near the base of the primaries, the marginal line of both wings reddish-brown, and the fringe greyish-brown; the underside pale yellowish-grey, very thickly irrorated with brown scales, the lines as above, but not nearly so distinct: head, thorax, abdomen, antennæ, and legs greyish-brown, the anal tuft slightly yellowish. Expanse  $1\frac{1}{2}$  inch.

Hab. Mexico, Amula in Guerrero 6000 feet, Cuernavaca in Morelos (H. H. Smith).

Two examples. G. megasa is allied to G. fundaria (Guen.), from which it may be at once distinguished by the lines crossing the wings on the underside. The specimen from Cuernavaca is slightly paler than the one from Amula, from which the description is taken.

# 6. Gynopteryx minoa, sp. n. (Tab. XLIV. fig. 17, &.)

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (Champion).

One pair.

## 7. Gynopteryx asteria, sp. n. (Tab. XLIV. figg. 18, &; 19, &.)

Male. Primaries and secondaries pale yellow; the primaries crossed from the costal margin near the base to the inner margin by a faint curved brownish line, and with a dark yellow line edged with white on the outer side extending from the apex to the inner margin, the outer margin broadly bordered with brown, a minute black spot at the end of the cell; the secondaries crossed about the middle from the costal to the inner margin by a yellow line edged with white, and with three or four very indistinct brown submarginal dots near the anal angle; the underside rather paler in colour: head, thorax, and antennæ pale brown, the tegulæ yellow, the abdomen and legs brownish-yellow. The female of a darker yellow colour than the male, with the outer border of the primaries considerably paler and with some indistinct greyish spots. Expanse, of  $1\frac{1}{2}$ , 2  $1\frac{6}{10}$  inch.

Hab. Mexico, Paso de San Juan in Vera Cruz (coll. Schaus); Guatemala, Zapote, Cubulco, San Gerónimo (Champion).

Mr. Schaus informs us that this species is common in Eastern Mexico. Our description and figures are taken from San Gerónimo specimens.

### APICIA.

Apicia, Guenée, Sp. gén. des Lép. ix. p. 81 (1857) (pars); Walker, Cat. xx. p. 101.

This genus is represented in our region by a considerable number of species, some of them showing great variation in colour. Like many of the allied genera, Apicia appears to be confined to Tropical America.

## 1. Apicia alteraria.

Apicia alteraria, Guen. Sp. gén. des Lép. ix. p. 83 (3 2)<sup>1</sup>; Walk. Cat. xx. p. 104<sup>2</sup>. Caberodes claridiscata, Walk. Cat. xxvi. p. 1514 (3)<sup>3</sup>.

Hab. Mexico, Coatepec (coll. Schaus), Teapa in Tabasco (H. H. Smith); Nicaragua, Chontales (Janson); Costa Rica, Caché (Rogers); Panama, Bugaba (Champion), Chiriqui (Arcé, in mus. D.), Volcan de Chiriqui (Trötsch, in mus. Staudinger), Panama city (J. J. Walker).—Venezuela<sup>3</sup>; Guiana, Cayenne<sup>12</sup>.

Varies in colour and in the distinctness of the dark markings, these being almost obliterated in some specimens.

# 2. Apicia distycharia.

Apicia distycharia, Guen. Sp. gén. des Lép. ix. p. 83 (3)1; Walk. Cat. xx. p. 1042.

Hab. Mexico, Atoyac in Vera Cruz (H. H. Smith); Panama, Bugaba 800 to 1500 feet, Volcan de Chiriqui 2000 to 4000 feet (Champion), Chiriqui (Trötsch, in mus. Staudinger).—Guiana, Cayenne 12.

This insect is closely allied to A. alteraria, Guen.

# 3. Apicia quartaria.

Apicia quartaria, Guen. Sp. gén. des Lép. ix. p. 83 (2)1; Walk. Cat. xx. p. 1052.

Hab. Mexico, Presidio de Mazatlan (Forrer), Paso de San Juan in Vera Cruz (coll.

APICIA.

Schaus), Atoyac in Vera Cruz, Teapa in Tabasco (H. H. Smith); Panama (Ribbe, in mus. Staudinger).—Brazil 12.

Mr. Herbert Smith captured a good series of specimens of this species in Eastern Mexico, during the months of March, April, and May 1888.

# 4. Apicia medusa, sp. n. (Tab. XLIV. fig. 20, 2.)

Female. Primaries and secondaries pale citron-yellow, thickly irrorated with small brown spots, the primaries crossed from the apex to the inner margin by a narrow faint brown line (which is more distinct in some specimens than in others) and with the outer margin slightly shaded with brown, the fringe pale yellow; the underside very much as above: head, thorax, antennæ, legs, and abdomen yellow shaded with pale brown. Expanse  $1\frac{1}{4}$  inch.

Hab. Honduras, Ruatan Island (Gaumer).

Three specimens, all females.

## 5. Apicia atilla, sp. n. (Tab. XLIV. fig. 21, &.)

Male. Primaries dark brown, crossed from the apex to the inner margin by a rather wide cream-coloured line, which is edged on the inner side with reddish-brown, and with a 

-shaped line close to the base extending from the costal to the inner margin, the fringe dark brown; secondaries paler brown, almost cream-colour on the costal margin, with a cream-coloured line partly crossing from the inner margin about the middle but not reaching the costal margin, the fringe silky-brown; the underside pale brown with a yellowish tinge, thickly irrorated with brown scales, the outer margins bordered with darker brown: head, thorax, abdomen, antennæ, and legs brown. Expanse 1 ½ inch.

Hab. Mexico, Amula in Guerrero 6000 feet (H. H. Smith).

One specimen.

# 6. Apicia mesada, sp. n. (Tab. XLIV. fig. 22, &.)

Male. Primaries and secondaries very pale brownish-white, irrorated with minute brown scales, both wings crossed by a narrow brown line, that on the primaries extending from the apex to the inner margin, the primaries with four black spots on the outer side of the line close to the apex, and a black dot at the end of the cell, from which a very faint brown line crosses the wing to the inner margin, the fringe brown; the underside coloured as above, but with the lines very indistinct: head, thorax, abdomen, and legs pale brownish-white, the antennæ brown. Expanse 1 inch.

Hab. Mexico, Paso de San Juan in Vera Cruz (coll. Schaus).

One specimen.

# 7. Apicia melenda, sp. n. (Tab. XLIV. figg. 23, &; 24, \$2.)

Male. Primaries creamy-white, irrorated with brown scales, the base and outer margin broadly bordered with dark brown, a narrow brown line crossing the wing from the costal to the inner margin: secondaries creamy-white to beyond the middle, thickly mottled with pale brown, a narrow brown line crossing beyond the middle from the costal to the inner margin, the outer margin broadly bordered with brown; the underside very much as above, but considerably paler in colour: head, thorax, abdomen, antennæ, and legs pale brown. The female differs from the male in not having dark margins to the wings, which are thickly irrorated all over with very fine brown lines and scales; the underside is coloured nearly as above. Expanse,  $\delta 1\frac{2}{10}$ ,  $21\frac{1}{4}$  inch.

Hab. Mexico, Jalisco (Schumann), Dos Arroyos in Guerrero 1000 feet, Atoyac in Vera Cruz, Teapa in Tabasco (H. H. Smith), Coatepec (Brooks), Paso de San

Juan in Vera Cruz (coll. Schaus); Guatemala (Conradt, in mus. Staudinger), San Juan, Senahu, and San Gerónimo in Vera Paz, Zapote (Champion); Costa Rica, Volcan de Irazu 6000 to 7000 feet (Rogers); Panama, Bugaba 800 to 1500 feet (Champion).

Apparently a very common insect throughout our region. It varies exceedingly in both sexes, from creamy-white to dark brown, but in no one locality is it at all constant. Our description and figures are taken from Guatemalan specimens, these belonging to the form of which we have the largest number of examples. A female from Bugaba differs from the others in its very dark brown colour; it may prove to be specifically distinct.

We figure a pair from Zapote.

8. Apicia aurana, sp. n. (Tab. XLIV. fig. 25, &.)

Male. Primaries and secondaries very pale yellow, thickly irrorated and streaked with fine brown lines and spots, both wings with a black dot at the end of the cell and the outer margin very broadly bordered with purplish-brown, the inner side of the marginal band very much dentated, the fringe purplish-brown; the underside very much as above: head, thorax, and abdomen pale yellow, the legs yellow, the antennæ brown. Expanse  $1\frac{2}{10}$  inch.

Hab. Mexico, Amula in Guerrero 6000 feet (H. H. Smith).

Three specimens.

9. Apicia micca, sp. n. (Tab. XLIV. fig. 26, &.)

Male. Primaries and secondaries greyish-fawn-colour, the primaries crossed from the costal to the inner margin by two fine brown lines, which are edged with pale yellow—the first >-shaped, near the base, the second beyond the middle,—and with a small black dot at the end of the cell, the secondaries crossed about the middle by a narrow brown line, the fringe greyish; the underside coloured as above, but entirely without markings: head, thorax, abdomen, antennæ, and legs greyish-fawn-colour. Expanse  $1\frac{1}{10}$  inch.

Hab. Mexico, La Venta in Guerrero 300 feet (H. H. Smith).

One specimen.

10. Apicia atia, sp. n. (Tab. XLIV. fig. 27, &.)

Male. Primaries and secondaries very pale fawn-colour, both wings crossed beyond the middle by a waved narrow brown line and with a dark brown dot at the end of the cell, the marginal line dark brown, the fringe pale fawn-colour; the underside as above, but very much paler in colour: head, thorax, abdomen, and legs pale fawn-colour, the antennæ darker. Expanse 1½ inch.

Hab. Mexico, Cuernavaca in Morelos, Teapa in Tabasco (H. H. Smith).

Two specimens, that from Cuernavaca being much paler than the other. The one from Teapa is figured.

11. Apicia mera, sp. n. (Tab. XLIV. figg. 28, 3; 29, 2.)

Male. Primaries and secondaries pale orange-yellow, thickly streaked with very narrow pale brown lines; the primaries crossed from the costal to the inner margin by two pale brown narrow lines—the first waved

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and near the base, the second beyond the middle,—and with a black dot at the end of the cell and a submarginal row of very indistinct brownish-yellow spots; the secondaries crossed about the middle from
the costal to the inner margin by a fine brown line, and with a submarginal row of very indistinct spots
extending from the apex to the anal angle; the underside very pale yellow, with the lines indistinct:
head, thorax, and abdomen yellow, the antennæ and legs brownish-yellow. The female orange-yellow,
very heavily blotched and irrorated with pale reddish-fawn-colour, and the underside more distinctly
marked than in the male. Expanse,  $\delta 1\frac{2}{10}$ ,  $21\frac{1}{2}$  inch.

Hab. Mexico, Jalapa (coll. Schaus); Guatemala, Las Mercedes 3000 feet, San Isidro 1600 feet, Zapote, San Gerónimo, San Joaquin (Champion); Panama, Chiriqui (Ribbe), Bugaba 800 to 1500 feet, Volcan de Chiriqui 2000 to 3000 feet (Champion).

This species varies very considerably, not only in colour, but in the distinctness of the markings, some specimens being almost clear yellow, with only the lines crossing the wings.

We figure a pair from Las Mercedes.

### 12. Apicia trifilaria.

Microsema trifilaria, Herr.-Schäff. Samml. aussereur. Schmett. pp. 43, 64, 82, fig. 337 (3)<sup>1</sup>. Apicia trifilaria, Guen. Sp. gén. des Lép. ix. p. 85 (3)<sup>2</sup>; Walk. Cat. xx. p. 106<sup>3</sup>.

Hab. Mexico, Jalapa (M. Trujillo), Coatepec, Paso de San Juan in Vera Cruz (coll. Schaus), Vera Cruz, Teapa in Tabasco (H. H. Smith); Guatemala, Panima, Senahu, Cahabon, and San Gerónimo in Vera Paz, Coatepeque, Las Mercedes, San Isidro, Volcan de Atitlan, Zapote (Champion); Costa Rica, Volcan de Irazu, Rio Sucio, Caché (Rogers); Panama, Chiriqui (Arcé, in mus. D.; Ribbe and Trötsch, in mus. Staudinger), Volcan de Chiriqui 3000 to 4000 feet (Champion).—Colombia<sup>23</sup>; Ecuador; Peru; Brazil, Rio Janeiro <sup>13</sup>.

A common and very variable species. We have received a large series of specimens, many of which are almost identical with Herrich-Schäffer's figure; others are fawn-colour, with the lines broader and darker. It is quite possible that *Microgonia polygrapharia*, Herr.-Schäff., from Brazil, is only a variety of this species; many of our specimens of the latter are darker than it, but they have no white line crossing the wings.

# 13. Apicia aurelia, sp. n. (Tab. XLV. fig. 1, ♀.)

Female. Primaries and secondaries pale sandy-brown, considerably darker round the outer portion, both wings crossed beyond the middle by a narrow brown line, which is edged with paler colour on the outer side, and with two black dots at the end of the cell; the secondaries with a small brownish-black spot on the inner margin just above the anal angle, the fringe sandy-brown; the underside considerably paler than above, with the lines broken up into a row of very minute spots: head, thorax, abdomen, legs, and antennæ pale sandy-brown. Expanse  $1\frac{2}{10}$  inch.

Hab. Panama, Chiriqui (Trötsch, in mus. Staudinger).

Allied to A. trifilaria (Herr.-Schäff.). One specimen.

14. Apicia megania, sp. n. (Tab. XLV. fig. 2, &.)

Male. Primaries and secondaries pale brown, slightly irrorated with very indistinct darker brown scales, the primaries with a greyish spot on the costal margin close to the apex, both wings with a marginal row of very minute indistinct dark brown spots; the underside very much paler than above: head, thorax, abdomen, and legs pale brown, the antennæ darker. Expanse  $1\frac{2}{10}$  inch.

Hab. Panama, Chiriqui (Ribbe, in mus. Staudinger).

One specimen.

### MELINOIDES.

Melinoides, Herrich-Schäffer, Samml. aussereur. Schmett. p. 44 (1850–58). Melinodes, Guenée, Sp. gén. des Lép. ix. p. 90; Walker, Cat. xx. p. 113 (pars).

A single species only was included in this genus by Herrich-Schäffer and Guenée; this insect extends northward into our region. *Melinodes amphisaria*, Walk., as already noted (anteà, p. 33), is a *Pyrinia*.

## 1. Welinoides detersaria.

Melinoides detersaria, Herr.-Schäff. Samml. aussereur. Schmett. pp. 44, 64, fig. 312 (3)<sup>1</sup>. Melinodes detersaria, Guen. Sp. gén. des Lép. ix. p. 90<sup>2</sup>; Walk. Cat. xx. p. 113<sup>3</sup>.

Hab. Guatemala, Las Mercedes 3000 feet, Volcan de Atitlan 2500 to 3500 feet, San Gerónimo (Champion); Costa Rica, Volcan de Irazu 6000 to 7000 feet. (Rogers); Panama, Volcan de Chiriqui 2000 to 3000 feet (Champion).—Colombia 1 2 3.

### SYNNOMOS.

Synnomos, Guenée, Sp. gén. des Lép. ix. p. 94 (1857); Walker, Cat. xx. p. 117.

This genus was based upon a single species, the female only of which was known to its author.

1. Synnomos firmamentaria.

Synnomos firmamentaria, Guen. Sp. gén. des Lép. ix. p. 94 (2)<sup>1</sup>; Walk. Cat. xx. p. 117<sup>2</sup>. Hab. Mexico<sup>2</sup>, Cordova<sup>1</sup>.

Unknown to me.

### NEMATOCAMPA.

Nematocampa, Guenée, Sp. gén. des Lép. ix. p. 120 (1857); Walker, Cat. xx. p. 147; Packard, in Report of the U.S. Geol. Survey of the Territ. x. p. 470, t. 5. fig. 10 (neuration) (1876).

1. Nematocampa filamentaria.

Nematocampa filamentaria, Guen. Sp. gén. des Lép. ix. p. 121, t. 5. fig. 1, and t. 2. fig. 3 (larva)
Pack. Guide to the Study of Insects, p. 320, t. 8. figg. 7, 7a (1869)<sup>2</sup>, and in Report of the U.S.
Geol. Survey of the Territ. x. p. 471, t. 11. fig. 46, and t. 13. figg. 8, 8a (larva and pupa)<sup>3</sup>.

Microgonia vestitaria, Herr.-Schäff. Samml. aussereur. Schmett. pp. 63, 82, fig. 368<sup>4</sup>.

Microgonia resistaria, Herr.-Schäff. loc. cit. p. 41<sup>5</sup>.

Nematocampa resistaria, Walk. Cat. xx. p. 147 6.

Nematocampa expunctaria, Grote, Canad. Nat. iv. p. 1017.

Hab. North America<sup>1 2 3 6 7</sup>.—Mexico, Atoyac in Vera Cruz (Schumann), Jalapa (coll. Schaus), Teapa in Tabasco (H. H. Smith); Guatemala, Volcan de Atitlan 2500 to 3500 feet (Champion).—Brazil <sup>4 6</sup>.

Varies considerably in colour and size. Mexican specimens are rather more highly coloured than those from North America in my own collection.

### 2. Nematocampa reticulata.

Nematocampa reticulata, Butl. Trans. Ent. Soc. Lond. 1881, p. 3231.

Hab. Mexico, Presidio de Mazatlan (Forrer), Coatepec (coll. Schaus), Teapa in Tabasco (H. H. Smith).—Amazons 1; Brazil, Rio Janeiro.

This species is altogether larger than N. filamentaria, and has the wings more angular in shape. Mexican specimens agree well with the type.

### HETEROLOCHA.

Heterolocha, Lederer, Verh. zool.-bot. Ges. Wien, iii. p. 207 (1853); Guenée, Sp. gén. des Lép. ix. p. 105; Walker, Cat. xx. p. 135; Snellen, Tijdschr. voor Ent. xvii. p. 22.

### 1. Heterolocha apricaria.

Metrocampa apricaria, Herr.-Schäff. Samml. aussereur. Schmett. pp. 63, 82, fig. 363 (2)1.

Heterolocha apricaria, Guen. Sp. gén. des Lép. ix. p. 108<sup>2</sup>; Walk. Cat. xx. p. 136<sup>3</sup>; Snellen, Tijdschr. voor Ent. xvii. p. 23<sup>4</sup>.

Hab. Mexico, Durango city (Becker), Jalapa, Coatepec (coll. Schaus); Guatemala, San Gerónimo and Sinanja in Vera Paz, Las Mercedes 3000 feet (Champion); Costa Rica, Volcan de Izaru 6000 to 7000 feet, San Francisco 4500 feet (Rogers); Panama, Chiriqui (Ribbe, in mus. Staudinger), Volcan de Chiriqui 2000 to 3000 feet (Champion).

—Colombia<sup>4</sup>; Venezuela<sup>123</sup>; Ecuador.

A common and very variable species. A female from Chiriqui in Dr. Staudinger's collection is almost without markings on the wings.

### EPIONE.

Epione, Duponchel, in Godart's Hist. Nat. Lép. Fr. iv. 2, p. 105 (1829); Walker, Cat. xx. p. 117.

# 1. Epione (?) asteria, sp. n. (Tab. XLV. figg. 3, &; 4, \( \omega \).)

Male. Primaries bright yellow, slightly streaked on the costal margin with brown, the outer margin from the apex to the anal angle broadly bordered with dark brown, a black spot at the end of the cell, the fringe dark brown; secondaries bright yellow, with a minute black dot at the end of the cell, below which a very faint line crosses the wing from the costal to the inner margin, a submarginal row of dark brown spots extending from the apex to the anal angle, the fringe bright yellow; the underside very similar in colour, but thickly irrorated with dark brown scales: head, the thorax in front, the antennæ, and legs pale

brown, the rest of the thorax and the abdomen yellow. The female considerably paler in colour, the base of the primaries brownish, the line crossing the secondaries much wider. Expanse,  $31\frac{1}{4}$ ,  $21\frac{2}{10}$  inch.

Hab. Mexico, Durango (Forrer), Cordova (Rümeli), Coatepec (coll. Schaus, Brooks) Jalapa (coll. Schaus, M. Trujillo), Orizaba (F. D. Godman, H. J. Elwes), Xucumanatlan 7000 feet, and Amula 6000 feet, both in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (H. H. Smith); Guatemala, in the city, Dueñas, Calderas, San Gerónimo (Champion); Panama, Chiriqui (Trötsch, in mus. Staudinger).

A most variable species, and very common in Mexico, where it is found on the wing nearly every month in the year. Some specimens are almost entirely yellow, without markings; others are very pale. A female in Mr. Schaus's collection is without the brown margin to the primaries, agreeing well with one from the city of Guatemala. Our description and figures are taken from heavily marked Atoyac specimens; in many others we have received the secondaries are entirely without markings.

2. Epione (?) megamede, sp. n. (Tab. XLV. figg. 5, &; 6, \$2.)

Male. Primaries and secondaries pale lemon-yellow, very thickly irrorated with minute pale brown streaks; the primaries crossed from the costal to the inner margin by two pale brown waved lines—the first near the base, the second beyond the cell,—and with a small blackish-brown spot at the end of the cell; the secondaries crossed about the middle from the costal to the inner margin by a very fine brown line, below which is a second indistinct waved rather broader line, and with a small black spot at the end of the cell; the marginal line of both wings pale brown, the fringe pale lemon-yellow; the underside considerably paler in colour, and with the markings very indistinct: head, thorax, abdomen, and legs pale yellow.—

Female. Primaries and secondaries of a paler yellow colour than in the male; the lines very indistinct, being only indicated by pale brown streaks; a rather large irregular brownish-fawn-coloured spot on the costal margin close to the apex; the underside almost as above. Expanse, 3 1¼, 2 1½ inch.

Hab. Mexico (Boucard, in mus. D.), Las Vigas (coll. Schaus), Amecameca (F. D. G.).

Our specimens of this species are in poor condition. We figure a pair belonging to Mr. Schaus, who informs me that E. megamede is a common insect at Las Vigas.

# 3. Epione — ?

Hab. Guatemala, Totonicapam 8500 to 10,500 feet (Champion).

One specimen, too worn for identification.

#### SYRRHODIA.

Syrrhodia, Hübner, Verz. bek. Schmett. p. 300 (1816).

Hyperythra, Guenée, Sp. gén. des Lép. ix. p. 99 (1857); Walker, Cat. xx. p. 124.

Syrrhodia includes species from India and other eastern localities, as well as from Tropical America. The type, S. decrepitaria, occurs in our region.

# 1. Syrrhodia decrepitaria.

Syrrhodia decrepitaria, Hübn. Verz. bek. Schmett. p. 300<sup>1</sup>; Zutr. Samml. exot. Schmett. ii. p. 29. figg, 371, 372<sup>2</sup>.

Aspilates decrepitaria, Guen. Sp. gén. des Lép. x. p. 1843; Walk. Cat. xxiv. p. 10694.

Hyperythra decrepitaria, Butl. Trans. Ent. Soc. Lond. 1881, p. 322 5.

Hyperythra versatiliaria, Guen. loc. cit. ix. p. 102 <sup>6</sup>; Walk. Cat. xx. p. 125 <sup>7</sup>; Snell. Tijdschr. voor Ent. xvii. p. 21 <sup>8</sup>; Möschl. Verh. zool.-bot. Ges. Wien, xxxi. p. 400 <sup>9</sup>, and Beitr. zur Schmett.-Fauna von Surinam, iv. p. 10 <sup>10</sup>.

Syrrhodia versatiliaria, Feld. & Rogenh. Reise der Novara, Lep. t. 123. fig. 2211.

Hyperythra mimasaria, Walk. Cat. xx. p. 13212.

Hab. Mexico, Cordova (Rümeli), Coatepec, Paso de San Juan in Vera Cruz (coll. Schaus), Dos Arroyos 1000 feet, Tierra Colorada 2000 feet, both in Guerrero, Teapa in Tabasco (H. H. Smith), Valladolid in Yucatan (Gaumer); Guatemala, Cahabon, Panzos, Panima, and San Gerónimo in Vera Paz, Torola, Zapote, Pantaleon, San Isidro, El Reposo (Champion), Volcan de Santa Maria, on the Pacific slope (Richardson); Honduras 7; Costa Rica, Volcan de Irazu 6000 to 7000 feet (Rogers); Panama, Chiriqui (Ribbe; Arcé, in mus. D.), Volcan de Chiriqui 2000 to 3000 feet, David (Champion), Panama city, Taboga Island (J. J. Walker).—Colombia, Honda 8; Guiana, Surinam 9 10, Cayenne 6; Amazons 5; Brazil 3, Bahia 2 4; Antilles, Haiti 6, San Domingo 7 11.

This species is very common throughout Tropical America. It varies in colour from bright yellow to greenish-brown, and some specimens are almost pink. In fact, we have every grade of colour between the specimens described by Guenée as Hypery-thra versatiliaria and Hübner's figure of Syrrhodia decrepitaria. The female appears to be subject to much greater variation than the male. The markings are almost constant in both sexes, but they are sometimes very faint. Specimens from the Antilles in my own collection show just the same variation as those from the mainland. The locality for Hyperythra mimasaria was unknown to Walker 12.

#### SICYA.

Sicya, Guenée, Sp. gén. des Lép. ix. p. 104 (1857); Walker, Cat. xx. p. 133; Packard, in Report of the U. S. Geol. Survey of the Territ. x. p. 479, t. 5. fig. 14 (neuration) (1876).

1. Sicya pomona.

Sicya pomona, Oberth. Études d'Ent. vii. p. 21, t. 3. fig. 11 (1883) 1.

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet (Champion); Panama, Chiriqui (Trötsch, in mus. Staudinger).—Ecuador; Peru <sup>1</sup>.

I have only seen two specimens of this insect from our region; they agree well with others from Ecuador in my own collection. It is possible that S. pomona may prove to be inseparable from the Colombian S. directaria, Guen.

2. Sicya aurunca, sp. n. (Tab. XLV. fig. 7, &.)

Male. Primaries and secondaries pale greyish-yellow; the primaries crossed from the apex to near the middle of the inner margin by a yellow line, which is edged on the outer side with paler colour; the secondaries partly crossed from the inner margin above the anal angle by two yellowish lines, one of which is much more distinct than the other; the fringe of both wings greyish; the underside pale lemon-yellow, darker along the costal margins, without markings of any kind: head, thorax, and legs yellowish-grey, the antennæ pale brown. The female larger than the male and yellower in colour. Expanse, of 1\frac{1}{4}, \times 1\frac{1}{2} inch.

Hab. Guatemala, Zapote (Champion).

Two examples, including both sexes.

3. Sicya mesapia, sp. n. (Tab. XLV. fig. 8, &.)

Male. Primaries pale yellowish-grey with a greenish tinge, irrorated with darker scales, two yellowish lines crossing the wing from the costal to the inner margin—the first near the base, not quite reaching the costal margin, the second beyond the middle, extending from the apex to the middle of the inner margin—and a waved submarginal line extending from the apex to the anal angle, the fringe pale yellowish-brown; secondaries grey, crossed about the middle by a pale yellowish line, and with a short yellowish streak partly crossing from the anal angle towards the apex, the fringe alternately grey and pale yellow; the underside greyish-yellow, irrorated with darker scales, the lines as above but very indistinct: head, thorax, and legs pale yellowish-grey, the antennæ considerably darker. Expanse  $1_{10}^4$  inch.

Hab. Guatemala, Dueñas (Champion).

One specimen.

4. Sicya bala, sp. n. (Tab. XLV. fig. 9, &.)

Male. Primaries pale lemon-yellow, the costal and inner margins edged with fawn-colour, a narrow brown line, edged with pinkish-white on the outer side, extending from the apex to the middle of the inner margin, the wing on the outer side of the line near the anal angle shaded with fawn-colour (in some specimens this is much more distinct than in others), a minute black point at the end of the cell; secondaries pale silky fawn-colour, with a small black spot at the end of the cell; the fringe fawn-colour; the underside of the primaries dusky fawn-colour, with the line crossing the wing indistinct, that of the secondaries slightly paler than above: head and thorax lemon-yellow, the abdomen, antennæ, and legs pale fawn-colour. Expanse 1½ inch.

Hab. Mexico, Volcan de Ixtaccihuatl 11,500 feet (Richardson), Las Vigas (coll.

Schaus).

The specimen in Mr. Schaus's collection is not quite so yellow in colour as the one described and figured, but in other respects it is very similar.

5. Sicya neda, sp. n. (Tab. XLV. figg. 10, &; 11, 2.)

Male. Primaries lemon-yellow, irrorated with minute darker scales, with the costal margin and two waved lines, and also the marginal one, pinkish-fawn-colour, the first line crossing nearest the base, the second extending from the apex to the middle of the inner margin, the wing on the outer side of the second line also shaded with pinkish-fawn-colour, the fringe alternately pale yellow and fawn-colour; secondaries pale silky cream-colour, the outer margin and the fringe slightly yellowish; the underside of the primaries pale lemon-yellow, with the lines very indistinct, that of the secondaries as above: head, thorax, and antennæ lemon-yellow, the abdomen and legs fawn-colour. The female differs from the

male in the primaries having the second line only indicated by a few spots, and in having a large dark fawn-coloured mark extending from the anal angle partly over the wing and along the outer margin. Expanse,  $3 \frac{13}{4}$ ,  $2 \frac{14}{10}$  inch.

Hab. Mexico, Milpas in Durango 5900 feet (Forrer), Las Vigas (coll. Schaus).

Apparently a variable species. A female from Las Vigas has the primaries bright lemon-yellow, almost entirely without markings. Our figures are taken from a pair belonging to Mr. Schaus, who informs me that S. neda is a common insect at Las Vigas.

## 6. Sicya myron, sp. n. (Tab. XLV. figg. 12, &; 13, \$\omega\$.)

Male. Primaries reddish-orange, darker at the apex and yellower along the costal margin, with a black dot at the end of the cell, and a very faint pinkish line extending from the apex to the inner margin; secondaries pale yellowish-fawn-colour, paler at the base; the fringe of both wings fawn-colour; the underside paler than above: head, thorax, abdomen, legs, and antennæ reddish-fawn-colour. The female has the primaries yellow, heavily blotched with dark brownish-fawn-colour, and the lines wide and very distinct. Expanse,  $\Im Q$ ,  $1\frac{1}{2}$  inch.

Hab. Mexico, Las Vigas (coll. Schaus).

Two pairs.

# 7. Sicya (?) ascolia, sp. n. (Tab. XLV. fig. 14, &.)

Male. Primaries brownish-orange, crossed from the costal to the inner margin by two faint brown lines—the first near the base and very indistinct, the second beyond the middle,—the second one edged with a grey line on the outer side, a small dark brown spot at the end of the cell; secondaries pale fawn-colour, paler at the base and along the costal margin, with a faint brown line crossing about the middle; the fringe brownish-orange, that of the secondaries paler; the underside very pale greyish-fawn-colour, whitish at the apex and along the outer margin of the primaries, the lines as above but very faint: head, thorax, abdomen, antennæ, and legs brownish-orange. Expanse 1½ inch.

Hab. Mexico, Las Vigas (coll. Schaus), Amecameca (F. D. G.).

Six examples, no two of which are alike in colour. Some specimens are very pale fawn-colour, with the lines crossing the wings dark brown.

#### ACROTOMIA.

Acrotomia, Herrich-Schäffer, Samml. aussereur. Schmett. p. 64 (1850-58).

A single species, from Mexico, A. viminaria, was placed under this generic name by Herrich-Schäffer; I refer seven others to it.

### 1. Acrotomia viminaria.

Cratoptera viminaria, Herr.-Schäff. Samml. aussereur. Schmett. p. 44, figg. 313, 3141.

Acrotomia viminaria, Herr.-Schäff. loc. cit. p. 642.

Sicya (?) viminaria, Walk. Cat. xx. p. 1343.

Hab. MEXICO 123.

We have not received any specimens quite agreeing with Herrich-Schäffer's figure, from which Walker's diagnosis <sup>3</sup> is taken. It is probable that *Hyperythra syctaria*, Walk., from Venezuela, is a form of the same species.

## 2. Acrotomia syctaria,

Hyperythra syctaria, Walk. Cat. xx. p. 1261.

Hab. Mexico, Dos Arroyos in Guerrero 1000 feet (H. H. Smith), Paso de San Juan in Vera Cruz (coll. Schaus); Guatemala, Cerro Zunil 4000 feet (Champion); Honduras (Wittkugel, in coll. Staudinger); Costa Rica, Volcan de Irazu 6000 to 7000 feet (Rogers); Panama, near the city (J. J. Walker).—Venezuela 1.

Mr. Schaus informs us that this is a very common insect in Eastern Mexico. It varies considerably in the depth of colour and in the markings.

# 3. Acrotomia muta, sp. n. (Tab. XLV. figg. 15, 16, &.)

Male. Primaries and secondaries yellowish-fawn-colour, darker round the outer margins; the primaries with a small black dot at the end of the cell, a narrow brown line edged with white on the outer side crossing from the apex to the inner margin, and a submarginal row of white spots extending from the apex to the anal angle, the marginal line white, the fringe brown; the secondaries crossed about the middle from the costal to the inner margin by a brown line, which is edged with white on the outer side, a submarginal row of small white spots extending from the apex to the anal angle; the underside orange-yellow, with the outer margin of both wings bright orange, the primaries with a rather wide dark brown submarginal band extending from the apex to the anal angle, and on the outer side of this a very fine waved white line: head, antennæ, thorax, and abdomen yellowish-fawn-colour above, pale yellow beneath; the legs yellow. Expanse  $1\frac{6}{10}$  inch.

Hab. Panama, Chiriqui (Trötsch, in mus. Staudinger).

One specimen.

# 4. Acrotomia polla, sp. n. (Tab. XLV. figg. 17, &; 18, \, 2.)

Male. Primaries and secondaries pale creamy-fawn-colour; the primaries crossed from the apex to about the middle of the inner margin by a rather wide yellow line, and with a faint curved yellow line nearer the base, a small black dot at the end of the cell, a brown spot on the costal margin close to the apex, and a submarginal indistinct waved line extending from the apex to the anal angle, the fringe pale brown; the secondaries crossed about the middle by a yellow line similar to that on the primaries, and with a faint submarginal line extending from the apex to the anal angle, the fringe brown; the underside yellow, with a line crossing the primaries from the apex almost to the inner margin, a small black dot at the end of the cell on both wings: head, thorax, abdomen, and antennæ pale fawn-colour. The female differs from the male in having the primaries and secondaries irrorated with blackish-brown, and the line crossing them much more indistinct. Expanse,  $\delta 1\frac{7}{10}$ ,  $21\frac{1}{2}$  inch.

Hab. Panama, Chiriqui (Trötsch, in mus. Staudinger).

Two specimens, one of each sex.

# 5. Acrotomia (?) mucia, sp. n. (Tab. XLV. figg. 19, 20, &.)

Male. Primaries and secondaries yellowish-olive-colour with a greyish gloss; the primaries crossed from the costal to the inner margin by two darker curved lines—the first near the base, edged on the inner side with a very fine waved white line, the second about the middle,—beyond which a zigzag fine white line extends from the costal margin near the apex to about the middle of the inner margin, where it joins the second dark line crossing the wing, the fringe olive-yellow; the secondaries crossed beyond the middle by a zigzag white line, beyond which is an indistinct greyish band, and with a very distinct black spot at the end of the cell, the fringe orange-yellow; the underside of the primaries greenish-yellow, with a submarginal brown line extending from the apex to the inner margin, and a spot at the end of the cell and the